

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009210**Date Inspected:** 24-Sep-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 645**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Guo Yan Fei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG and Tower**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Larry Viars was present during the times noted above for observations relative to the work being performed.

Trial Assembly-

Caltrans QA performed Magnetic Particle Testing (MT) of OBG segment 1AAW to 1AW deck panel and side panel transverse splice. Critical weld repair excavations after ZPMC Magnetic Particle Testing (MT) technicians had marked transverse indications for removal and ZPMC personnel performed grinding of these areas. A total of 24 deck panel excavation areas were tested and six excavation areas transverse indications were found. Two excavation areas were tested on OBW1A-004 one excavation had a 15 mm transverse indication. This considered an in process inspection and excavation areas have not been accepted by ZPMC QC. See attached photographs of transverse indications.

Bay 9 - PMT

This QA inspector monitored OBG Production Monitoring Test (PMT) # 2 for deck panels DP3067-001, DP3044A-001 and DP3047A-001 at Gantry #2. The PMT for these panels was rejected by Caltrans QA the prior day for unacceptable Macroetch samples. The magnetic particle testing (MT) of the tack welds was noted on the test panel as having been performed by ZPMC MT Inspector Jin Jian Ting. The visual inspection of tack welds and root gap was performed by ABF Representative Huang Wen Guang (ABF), ZPMC CWI Guo Yan Fei (QC), and this QA inspector. The start time for welding of PMT was approximately 0017 hours on 9/25/09 and welding

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## WELDING INSPECTION REPORT

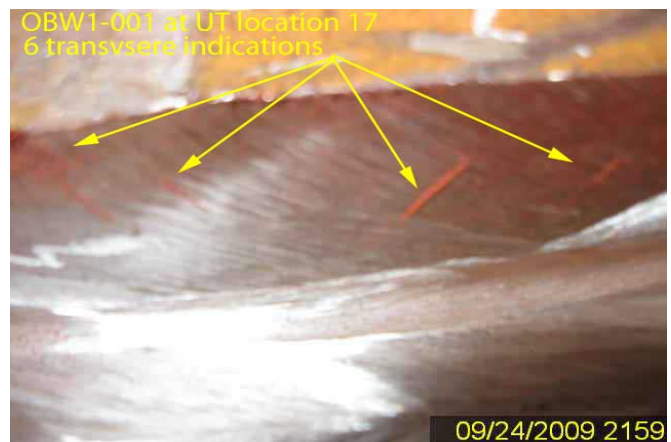
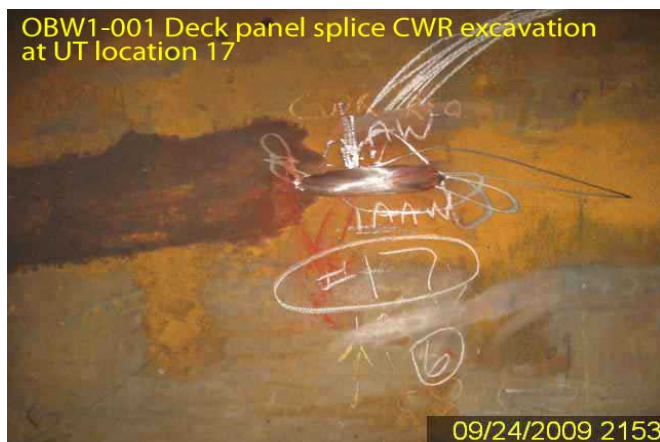
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was completed approximately at 0044 hours. This QA inspector randomly verified and documented the welding amperage, voltage and travel speed during the gas metal arc welding (GMAW) and submerged arc welding (SAW) processes. After completion of both the GMAW root pass and SAW cover pass the welds were visually inspected by ABF, QC and this QA inspector. QC and ABF informed QA Inspector that all six welds were acceptable and QA inspector concurred. This QA inspector witnessed ZPMC Ultrasonic Testing (UT) inspector, identified as Ma Ji Long perform UT for depth of penetration on the 500 mm area designated by ZPMC QC for visual inspection. This QA inspector selected fifteen designated locations for macroetch sampling per contract requirements. Each macroetch location was stamped by ZPMC personnel with the number 3067, as well as the letter p, and an individual macroetch identifying number for each macroetch. After removal from each of the weld test specimens and polishing of the selected end, the macroetches were evaluated with a 7X optical magnifier and accepted by ZPMC QC, ABF QC, and this QA Inspector.

All fifteen sample macros appeared to meet requirements and were noted to appear acceptable. See Caltrans U-ribs PMT Inspection Sheet, ZPMC production monitoring test plate inspection report, and Caltrans Macro Etch Log - all dated 9/25/2009 for additional information.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



### Summary of Conversations:

Only general conversation between QC and QA occurred this date.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 150 0042 2372, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Viars,Larry	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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